



Natural Resources Conservation Service  
210 Walnut Street, Room 693  
Des Moines, IA 50309-2180

November 18, 2008

IOWA BULLETIN NO. IA180-9-1

SUBJECT: CPA - GUIDANCE ON SELECTION OF SOIL MAP UNIT (SMU) FOR PLANNING PURPOSES

PURPOSE: To provide guidance in the identification of soil map units used when providing assistance to land users. This document will clarify soil map units used in conservation planning, conservation compliance planning, and phosphorus index data.

EXPIRATION DATE: September 30, 2010

Conservation Planning – Use of Dominant Critical Area: Iowa NRCS Agronomy Technical Note #29 provides instruction in determining the Soil Map Unit(s) used in Conservation Plan development of a Resource Management System (RMS). In Technical Note #29, the statement on page 2 has been revised to say “Some CMUs may also have a small, insignificant area that cannot be feasibly managed separately, that is much steeper and more erosive.” The intent of the guidance is not to establish a hard rule that the most critical soil of a specific percentage within a field is to be used for all conservation planning. It is the intent to enable conservation planners to utilize their best professional judgment in determining the Dominant Critical Area to use in development of a conservation plan. The conservation planner may use Geographic Information System (GIS) to determine the percentage of each soil map unit but should also look at other factors such as:

- grouping SMUs of like slope class to determine dominant critical area;
- location of SMU(s) on the landscape;
- size of the critical area;
- location and size within the field of the critical area (small pockets scattered throughout the field or located in a general area);
- resource concern(s) created by the critical area; and
- client’s willingness to separate the area into a separate Conservation Management Unit and treat it separately.

Planners are to use their “experience and technical tools” to define the area and soil map unit for use in RMS conservation planning.

Conservation Compliance Planning - Predominant Highly Erodible Soil Map Unit: Iowa NRCS Field Office Technical Guide, Section III, Alternative Conservation Systems, contains the Iowa NRCS requirements for conservation planning for highly erodible land (HEL) in Iowa. The “Predominant Highly Erodible Soil Map Unit” is defined as the highly erodible soil map unit with the greatest percentage of the highly erodible soil map units. When doing conservation compliance planning, the soil map unit to be addressed is the Predominant Highly Erodible Soil, regardless of the percentage.

Soil Map Unit Selection for the use in the Phosphorus Index (P-Index): The P-Index is required to be run if the area of concern is in a 303(d) listed watershed shown as impaired for P, organic nutrients are applied, soil loss is above T, or soil test P is in the Very High range. The SMU to be used is based on Iowa Administrative Code Chapter 65 that states “The most erosive SMU that is at least 10% of the total field area” will be used. If the P-Index risk assessment indicates a medium or higher risk then you must address this resource concern. This can be done by implementing P management practices or conservation practices to reduce the risk to a low risk level. Addressing the resource concern applies to the soil map unit used to calculate the P-Index. This can be applied to the resource area of concern or the entire field. The remaining area of the field can be “planned” using the Dominant Critical Area.

Please contact Barbara Stewart, State Agronomist, at (515) 323-2260 or [barbara.stewart@ia.usda.gov](mailto:barbara.stewart@ia.usda.gov), with any questions.

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State Conservationist

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